

Amendment to the Claims:

1. (Original) A method for use of a computer-assisted surgery system during a medical procedure, comprising:
 - receiving information on an object of interest;
 - tracking the position of a tool;
 - 5 determining a scalar distance between a current position of said tool and said object of interest; and
 - providing an indication of said scalar distance to a user of said tool.
2. (Currently Amended) ~~The A method of claim 1, wherein said providing step comprises~~ for use of a computer-assisted surgery system during a medical procedure, the method comprising:
 - receiving information on an anatomical target region of a patient;
 - 5 tracking the position of a surgical tool as the tool is moved by a surgeon in performing the medical procedure;
 - determining a scalar distance between a current position of said surgical tool and the anatomical target region; and
 - providing to the user of the surgical tool a visual indication of said
 - 10 scalar distance ~~to said user of said tool.~~
3. (Original) The method of claim 2, further comprising, prior to said providing step, selecting a type of visual indication to provide to said user.
4. (Original) The method of claim 2, wherein said visual indication is provided by a visual indicator selected from the group consisting of a level meter, a dial, a numerical display, and a graph.
5. (Original) The method of claim 2, wherein said providing step comprises providing said visual indication of said scalar distance on a display device associated with a computer-assisted surgery system.

6. (Original) The method of claim 2, wherein said providing step comprises providing said visual indication of said scalar distance on a display device disposed on a haptic device associated with said computer-assisted surgery system.

7. (Currently Amended) The method of claim 2, wherein said providing step comprises providing said visual indication of said scalar distance on a display device disposed on ~~[[a]]~~ the surgical tool ~~used in proximity to an anatomy of a~~ the anatomical target region of the patient.

8. (Original) The method of claim 3, further comprising selecting a color for said visual indication based at least in part on said scalar distance.

9. (Original) The method of claim 2, further comprising, prior to said providing step, selecting said visual indication based at least in part on said scalar distance.

10. (Currently Amended) The method of claim ~~[[2]]~~ 1, wherein said object of interest comprises a surface of a haptic object defining a desired shape for an anatomy of a patient.

11. (Currently Amended) The method of claim ~~[[2]]~~ 1, wherein said object of interest comprises a portion of an anatomy of a patient.

12. (Original) The method of claim ~~[[2]]~~ 1, wherein said object of interest is selected from the group consisting of a curve, a point, a surface, a volume, and a set of desired positions.

13. (Currently Amended) The method of claim 2, wherein said providing step ~~comprises~~ further includes providing a predetermined visual indication indicating that said scalar distance is within an acceptable range.

14. (Currently Amended) The method of claim 2, wherein said providing step ~~comprises~~ further includes providing a predetermined visual indication indicating that said scalar distance is in an unacceptable range.

15. (Currently Amended) ~~The A method of claim 1, wherein said providing step comprises~~ for use of a computer-assisted surgery system during a medical procedure, comprising:

5 receiving information on an object of interest;
 tracking a position of a tool;
 determining a scalar distance between a current position of said tool
and said object of interest; and
 providing a tactile indication of said scalar distance to said user of said tool.

16. (Original) The method of claim 1, wherein said providing step further comprises causing vibration of a device that is in contact with said user.

17. (Original) The method of claim 1, further comprising selecting a type of indication based at least in part on said scalar distance.

18. (Original) The method of claim 1, wherein said providing step comprises providing said indication indicating that said scalar distance is within an acceptable range.

19. (Original) The method of claim 1, wherein said providing step comprises providing said indication indicating that said scalar distance is in an unacceptable range.

20. (Original) The method of claim 1, wherein said object of interest is selected from the group consisting of a curve, a point, a surface, a volume, and a set of desired positions.

21. (Currently Amended) ~~The A method of claim 1, wherein said providing step comprises~~ for use of a computer-assisted surgery system during a medical procedure, comprising:

- 5 receiving information on an object of interest;
 tracking a current position of a tool as the tool moves;
 determining a current scalar distance between the current position of
 said tool and said object of interest; and
 providing an audio signal which changes as the scalar distance changes
 to provide audio indication of said current scalar distance to said user of said tool.

22. (Original) The method of claim 21, further comprising, prior to said providing step, selecting a type of audio indication to provide to said user.

23. (Original) The method of claim 21, wherein said providing step comprises providing said audio indication of said scalar distance via an audio device associated with a computer-assisted surgery system.

24. (Original) The method of claim 21, wherein said providing step comprises providing said audio indication of said scalar distance via an audio device disposed on a haptic device associated with a computer-assisted surgery system.

25. (Currently Amended) The method of claim 21, wherein ~~said providing step comprises providing said audio indication of~~ the audio signal changes proportionately to changes in said current scalar distance ~~via an audio device disposed on a surgical tool used in proximity to an anatomy of a patient.~~

26. (Original) The method of claim 21, further comprising, prior to said providing step, selecting said audio indication based at least in part on said scalar distance.

27. (Original) The method of claim 21, wherein said object of interest comprises a surface of a haptic object defining a desired shape for an anatomy of a patient.

28. (Original) The method of claim 21, wherein said object of interest comprises a portion of an anatomy of a patient.

29. (Original) The method of claim 21, wherein said object of interest is selected from the group consisting of a curve, a point, a surface, a volume, and a set of desired positions.

30. (Currently Amended) The method of claim 21, wherein said providing step ~~comprises~~ further includes providing a predetermined audio indication indicating that said scalar distance is within an acceptable range.

31. (Currently Amended) The method of claim 21, wherein said providing step ~~comprises~~ further includes providing a predetermined audio indication indicating that said scalar distance is in an unacceptable range.

32. (Currently Amended) A computer-assisted surgery system for use during a medical procedure, comprising:

application logic operatively associated with said computer-assisted surgery system and operable to:

5 receive information on an object of interest located in an internal anatomy of a patient on whom the procedure is performed;

track the position of a surgical tool as the surgical tool moves at least in part through the internal anatomy of the patient during the medical procedure;

10 determine a current scalar distance between a current position of said tool and said object of interest; and

provide an indication of said current scalar distance to a user of said surgical tool which indication changes during the medical

15

procedure as the surgical tool moves through the internal anatomy of the patient.

33. (Original) The system of claim 32, wherein said application logic is further operable to provide a visual indication of said scalar distance to said user of said tool.

34. (Original) The system of claim 33, wherein said application logic is further operable to select a type of visual indication to provide to said user.

35. (Original) The system of claim 33, wherein said visual indication is provided by a visual indicator selected from the group consisting of a level meter, a dial, a numerical display, and a graph.

36. (Original) The system of claim 33, wherein said application logic is further operable to provide said visual indication of said scalar distance on a display device associated with said computer-assisted surgery system.

37. (Original) The system of claim 33, wherein said application logic is further operable to provide said visual indication of said scalar distance on a display device disposed on a haptic device associated with said computer-assisted surgery system.

38. (Currently Amended) ~~The~~ A computer assisted surgery system of claim 33, wherein said application logic is further operable to for use during a medical procedure, comprising:

5 a surgical tool for performing the medical procedure on an anatomy of a patient, the surgical tool having a display device disposed thereon;

a tracking system which tracks movement of the surgical tool during the medical procedure;

application logic operatively associated with said computer-assisted surgery system and operable to:

10 receive information about an object of interest in the
 anatomy of the patient;
 receive tool position information from the tracking
 system;
 determine a scalar distance between a current position
15 of said tool and said object of interest; and
 provide said visual indication of said scalar distance on
 [[a]] the display device disposed on [[a]] the surgical tool ~~used in~~
 ~~proximity to an anatomy of a patient.~~

39. (Original) The system of claim 34, wherein said application logic is further operable to select a color for said visual indication based at least in part on said scalar distance.

40. (Currently Amended) The system of claim 33, wherein said application logic is further operable to select ~~said~~ a plurality of visual indications based at least in part on said scalar distance.

41. (Original) The system of claim 33, wherein said object of interest comprises a surface of a haptic object defining a desired shape for an anatomy of a patient.

42. (Currently Amended) The system of claim 33, wherein said object of interest ~~comprises~~ defines a portion of [[an]] the anatomy of [[a]] the patient which is to be removed by the surgical tool during the medical procedure.

43. (Original) The system of claim 33, wherein said object of interest is selected from the group consisting of a curve, a point, a surface, a volume, and a set of desired positions.

44. (Original) The system of claim 33, wherein said application logic is further operable to provide a predetermined visual indication indicating that said scalar distance is within an acceptable range.

45. (Original) The system of claim 33, wherein said application logic is further operable to provide a predetermined visual indication indicating that said scalar distance is in an unacceptable range.

46. (Original) The system of claim 32, wherein said application logic is further operable to provide a tactile indication of said scalar distance to said user of said tool.

47. (Original) The system of claim 32, wherein said application logic is further operable to cause vibration of a device in contact with said user.

48. (Original) The system of claim 32, wherein said application logic is further operable to select a type of indication based at least in part on said scalar distance.

49. (Original) The system of claim 32, wherein said application logic is further operable to provide said indication indicating that said scalar distance is within an acceptable range.

50. (Original) The system of claim 32, wherein said application logic is further operable to provide said indication indicating that said scalar distance is in an unacceptable range.

51. (Original) The system of claim 32, wherein said surface of interest is selected from the group consisting of a curve, a point, a surface, a volume, and a set of desired positions.

52. (Currently Amended) ~~The~~ A computer-assisted surgery system of claim 32, wherein said application logic is further operable to for use during a medical procedure, comprising:

5 application logic operatively associated with said computer-assisted surgery system and operable to:

receive information on an object of interest;

track position changes of a movable medical tool;

10 determine a current scalar distance between a current position of said tool and said object of interest as the tool moves relative to the object during the medical procedure; and

provide an audio indication of said current scalar distance to said user of said tool.

53. (Original) The system of claim 52, wherein said application logic is further operable to select a type of audio indication to provide to said user.

54. (Original) The system of claim 52, wherein said application logic is further operable to provide said audio indication of said scalar distance via an audio device associated with said computer-assisted surgery system.

55. (Original) The system of claim 52, wherein said application logic is further operable to provide said audio indication of said scalar distance via an audio device disposed on a haptic device associated with said computer-assisted surgery system.

56. (Original) The system of claim 52, wherein said application logic is further operable to provide said audio indication of said scalar distance via an audio device disposed on a surgical tool used in proximity to an anatomy of a patient.

57. (Original) The system of claim 52, wherein said application logic is further operable to select said audio indication based at least in part on said scalar distance.

58. (Original) The system of claim 52, wherein said object of interest comprises a surface of a haptic object defining a desired shape for an anatomy of a patient.

59. (Original) The system of claim 52, wherein said object of interest comprises a portion of an anatomy of a patient.

60. (Original) The system of claim 52, wherein said object of interest is selected from the group consisting of a curve, a point, a surface, a volume, and a set of desired positions.

61. (Original) The system of claim 52, wherein said application logic is further operable to provide a predetermined audio indication indicating that said scalar distance is within an acceptable range.

62. (Original) The system of claim 52, wherein said application logic is further operable to provide a predetermined audio indication indicating that said scalar distance is in an unacceptable range.

63. (Original) The system of claim 52, wherein said application logic comprises computer executable software code.

64. (Currently Amended) The system of claim 32, wherein ~~said computer-assisted surgery system is a haptic device~~ the surgical tool removes bone material and the object of interest defines a surface of bone to be left after a bone material removal procedure.

65. (Original) The system of claim 32, wherein said computer-assisted surgery system comprises a haptic device.

66. (Currently Amended) A computer readable ~~storage~~ medium ~~storing~~ programmed with instructions which when executed by a programmable device cause the programmable device to execute the steps of:

receiving information on a object of interest;

5 ~~tracking the~~ determining a current position of a tool
used in performing a medical procedure;

determining a scalar distance between ~~[[a]]~~ the current
position of said tool and said object of interest; and

10 providing ~~[[an]]~~ a changing indication of said scalar
distance to a user of said tool as the tool moves during the medical
procedure.

67. (Currently Amended) The computer readable ~~storage~~ medium
of claim 66, wherein said indication is a visual indication.

68. (Currently Amended) The computer readable ~~storage~~ medium
of claim 66, wherein said indication is an audio indication.

69. (Currently Amended) The computer readable ~~storage~~ medium
of claim 66, wherein said indication is a tactile indication.

70. (Currently Amended) The computer readable ~~storage~~ medium
of claim 66, further comprising instructions which when executed by said
programmable device cause the programmable device to execute the step of selecting
a type of indication based at least in part on said scalar distance.

71. (Currently Amended) The computer readable ~~storage~~ medium
of claim 66, further comprising instructions which when executed by said

programmable device cause the programmable device to execute the step of providing said indication indicating that said scalar distance is within an acceptable range.

72. (Currently Amended) The computer readable ~~storage~~ medium of claim 66, further comprising instructions which when executed by said programmable device cause the programmable device to execute the step of providing said indication indicating that said scalar distance is within an unacceptable range.

73. (Currently Amended) The computer readable ~~storage~~ medium of claim 66, wherein said object of interest is selected from the group consisting of a curve, a point, a surface, a volume, and a set of desired positions.